Chemotherapy Protocol

TPLL

Alemtuzumab

Regimen

- TPLL – Alemtuzumab

Indication

- The treatment of adult patients with TPLL in the first line setting. In rare circumstances this can be used in B-PLL.
- Off license named patient supply from Clinigen
- WHO performance status 0, 1, 2

Toxicity

Drug	Adverse Effect
Alemtuzumab	Infusion-related reaction (fever, hypotension, chills, rashes), allergic/anaphylactic reaction, aneamia, leucopenia, thrombocytopenia.

The adverse effects listed are not exhaustive. Please refer to the relevant Summary of Product Characteristics for full details.

Monitoring

- Pre treatment blood tests - CMV serology, CMV PCR, hepatitis B core antibody and hepatitis B surface Ag, hepatitis C antibody, EBV, VZV, HIV 1+2 after consent, TP53 mutation analysis, FBC, FISH for the TCL1 (14q32.13-q32.2) and TCRAD (14q11.2) gene rearrangements, karyotype, biochemistry, glucose.
- Weekly CMV monitoring
- CT neck, chest, abdomen and pelvis.
- ECG +/-Echo if clinically indicated.
- Record performance status.
- Obtain written consent and confirm treatment in relevant MDT.
- Urine pregnancy test – before cycle 1 of each new chemotherapy course for women of child bearing age unless they are post menopausal, have been sterilised or undergone a hysterectomy.

Dose Modifications

The dose modifications listed are for haematological, liver and renal function and drug specific toxicities only. Dose adjustments may be necessary for other toxicities as well.

Please discuss all dose reductions / delays with the relevant consultant before prescribing, if appropriate. The approach may be different depending on the clinical circumstances.

Haematological

Refer to the responsible consultant as any dose reductions or delays will be dependent on clinical circumstances and treatment intent.

Consider blood transfusion or the use of erythropoietin according to NICE TA323 if the patient is symptomatic of anaemia or where the haemoglobin is less than 8g/dL.

Hepatic Impairment

No studies have been done in patients with hepatic dysfunction receiving alemtuzumab. Dose adjustment is a clinical decision but is unlikely to require reduction.

Renal Impairment

No studies have been conducted. No dose adjustment is recommended in renal impairment for patients receiving alemtuzumab

Regimen

12 weeks of treatment

Drug	Dose	Days	Administration
Alemtuzumab	3mg	Week 1, day 1	Intravenous over 2 hours
Alemtuzumab	10mg	Week 1, day 2	Intravenous over 2 hours
Alemtuzumab	30mg	Week 1, day 3	Intravenous over 2 hours
Alemtuzumab	30mg	Week 2-12, Days 1,3 and 5	Intravenous over 2 hours

Dose Information

- Alemtuzumab is available in 30mg vials
- The dose will be fixed to either 3, 10 or 30mg and diluted in 100ml NaCL 0.9%

Administration Information

Extravasation

- Alemtuzumab – non-vesicant

Additional Therapy

- Prior to the administration of alemtuzumab
    - Chlorphenamine 10mg intravenous
    - Paracetamol 1000mg oral

- Pethidine intravenous 12.5-25mg can be administered under the supervision of a doctor for the treatment of alemtuzumab induced rigors

- If the infusion is ongoing 4 hours after premedication then repeat
    - Chlorphenamine 10mg intravenous
    - Paracetamol 1000mg oral

- If severe infusion related reactions occur 200mg hydrocortisone IV may also be required 30 minutes pre dose

As take home medication

- Allopurinol 300mg once a day oral for 7 days oral

- Anti-infective prophylaxis with;

    - aciclovir 400mg twice a day oral and for 3 months after treatment
    - co-trimoxazole 960mg once a day on Monday, Wednesday and Friday only oral and for 3 months after treatment
    - Fluconazole 50mg daily for duration of treatment only

- Gastric protection with a proton pump inhibitor or a H2 antagonist may be considered in patients considered at high risk of GI ulceration or bleed.

- Minimal emetic risk.

Additional Information

- Monitor FBC, U&Es, LFTs, CMV PCR and glucose weekly

- Hydration - in patients with bulk disease pre-hydrate with 1 litre sodium chloride 0.9% over 4 - 6 hours. Patients at high risk of tumour lysis refer to tumour lysis protocol. Assess and document tumour lysis risk as part of pre-assessment

- If acute moderate to severe adverse reactions due to cytokine release (hypotension, rigors, fever, shortness of breath, chills, rashes and bronchospasm) occur at either the 3 mg or 10 mg dose levels, then those doses should be repeated until they are well tolerated before further dose escalation is attempted.

- The majority of major responses to alemtuzumab have been achieved with treatment durations of 4 - 12 weeks. Once a patient meets all laboratory and clinical criteria for a complete response, alemtuzumab should be discontinued and the patient monitored. If a patient improves (i.e. achieves a partial response or stable disease) and then reaches a plateau without further improvement for 4 weeks or more, then alemtuzumab should be discontinued and the patient monitored. Therapy should be discontinued if there is evidence of disease progression.

Coding

- Procurement – X
- Delivery – X

References

1. Claire E. Dearden, Amit Khot, Monica Else, Mike Hamblin, Effie Grand, Ashok Roy, Saman Hewamana, Estella Matutes, Daniel Catovsky. Alemtuzumab therapy in T-cell prolymphocytic leukemia: comparing efficacy in a series treated intravenously and a study piloting the subcutaneous route. Blood (2011) 118 (22): 5799–5802.
2. Keating MJ, Cazin B, Coutre S, Birhiray R, Kovacsovics T, Langer W, et al. Campath-1H treatment of T-cell prolymphocytic leukemia in patients for whom at least one prior chemotherapy regimen has failed. J Clin Oncol. 2002;20(1):205–13.
3. MabCampath product information, Schering Healthcare, July 2001.
4. UCLH - Dosage Adjustment for Cytotoxics in Hepatic Impairment (Version 3 - updated January 2009)
5. UCLH - Dosage Adjustment for Cytotoxics in Renal Impairment (Version 3 - updated January 2009)

REGIMEN SUMMARY

Alemtuzumab

Week 1

Day 1

1. Chlorphenamine 10mg intravenous
   Administration Instructions
   Administer 15-30 minutes prior to the alemtuzumab. Check in-patient prescribing system to ensure it has not been administered.

2. Paracetamol 1000mg oral
   Administration Instructions
   Administer 15-30 minutes prior to the alemtuzumab. Check in-patient prescribing system to ensure it has not been administered.

3. Alemtuzumab 3mg intravenous infusion in 100ml sodium chloride 0.9% over 2 hours.
   Administration Instructions
   Alemtuzumab should be started 30 minutes after a premedication of chlorphenamine 10mg intravenous and paracetamol 1000mg oral
   If rigors occur the infusion should be slowed, alemtuzumab may be administered over 8 hours. Administer pethidine12.5mg-25mg intravenous under the supervision of a doctor

Day 2

4. Chlorphenamine 10mg intravenous
   Administration Instructions
   Administer 15-30 minutes prior to the alemtuzumab. Check in-patient prescribing system to ensure it has not been administered.

5. Paracetamol 1000mg oral
   Administration Instructions
   Administer 15-30 minutes prior to the alemtuzumab. Check in-patient prescribing system to ensure it has not been administered.

6. Alemtuzumab 10mg intravenous infusion in 100ml sodium chloride 0.9% over 2 hours.
   Administration Instructions
   Alemtuzumab should be started 30 minutes after a premedication of chlorphenamine 10mg intravenous and paracetamol 1000mg oral
   If rigors occur the infusion should be slowed, alemtuzumab may be administered over 8 hours. Administer pethidine12.5mg-25mg intravenous under the supervision of a doctor

Day 3

7. Chlorphenamine 10mg intravenous
   Administration Instructions
   Administer 15-30 minutes prior to the alemtuzumab. Check in-patient prescribing system to ensure it has not been administered.

8. Paracetamol 1000mg oral
   Administration Instructions
   Administer 15-30 minutes prior to the alemtuzumab. Check in-patient prescribing system to ensure it has not been administered.

9. Alemtuzumab 30mg intravenous infusion in 100ml sodium chloride 0.9% over 2 hours.
   Administration Instructions
   Alemtuzumab should be started 30 minutes after a premedication of chlorphenamine 10mg intravenous and paracetamol 1000mg oral
   If rigors occur the infusion should be slowed, alemtuzumab may be administered over 8 hours. Administer pethidine12.5mg-25mg intravenous under the supervision of a doctor

Week 2-12

Day 1, 3 and 5

10. Chlorphenamine 10mg intravenous
    Administration Instructions
    Administer 15-30 minutes prior to the alemtuzumab. Check in-patient prescribing system to ensure it has not been administered.

11. Paracetamol 1000mg oral
    Administration Instructions
    Administer 15-30 minutes prior to the alemtuzumab. Check in-patient prescribing system to ensure it has not been administered.

12. Alemtuzumab 30mg intravenous infusion in 100ml sodium chloride 0.9% over 6 hours.
    Administration Instructions
    Alemtuzumab should be started 30 minutes after a premedication of chlorphenamine 10mg intravenous and paracetamol 1000mg oral
    If rigors occur the infusion should be slowed, alemtuzumab may be administered over 8 hours. Administer pethidine12.5mg-25mg intravenous under the supervision of a doctor

Take home medicines (day 1 only)

13. Allopurinol 300mg once a day for 7 days
    Administration Instructions
    Please refer to the protocol for recommendations on the prevention and treatment of tumour lysis syndrome. Individuals at high risk may require rasburicase.

14. Co-trimoxazole 960mg once a day on Monday, Wednesday and Friday only for 84 days oral

15. Aciclovir 400mg three times a day for 84 days

16. Fluconazole 50mg once a day for 84 days oral

17. Gastric Protection
    Administration Instructions
    The choice of gastric protection is dependent on local formulary choice and may include:

    - esomeprazole 20mg once a day oral
    - omeprazole 20mg once a day oral
    - lansoprazole 15mg once a day oral
    - pantoprazole 20mg once a day oral
    - rabeprazole 20mg once a day oral
    - cimetidine 400mg twice a day oral
    - famotidine 20mg once a day oral
    - nizatidine 150mg twice a day oral
    - ranitidine 150mg twice a day oral

    Please dispense 84 days or nearest original pack size.

DOCUMENT CONTROL

Version	Date	Amendment	Written By	Approved By
1	November 2023	None	Nanda Basker Pharmacist	David Dutton Haematology Consultant

This chemotherapy protocol has been developed as part of the chemotherapy electronic prescribing project. This was and remains a collaborative project that originated from the former CSCCN. These documents have been approved on behalf of the following Trusts;

Hampshire Hospitals NHS Foundation Trust
NHS Isle of Wight
Portsmouth Hospitals NHS Trust
Salisbury NHS Foundation Trust
University Hospital Southampton NHS Foundation Trust
Western Sussex Hospitals NHS Foundation Trust

All actions have been taken to ensure these protocols are correct. However, no responsibility can be taken for errors that occur as a result of following these guidelines.